REMARKS

Claims 1-22 are pending in this application. Claims 1 and 7 are independent claims. Claims 1, 3, 7, 13, and 14 are amended. Claim 2 is cancelled without any intent of prejudice to or disclaimer of the subject matter contained therein. Reconsideration and allowance of the present application are respectfully requested.

Example Embodiments

As described in at least paragraph [0006] of Applicant's published application, different "virtual environments" may be created without modeling the entire environment from the beginning. As described in at least paragraph [0007] of the published application, "local anatomic environments" are modeled to represent a set of anatomic variations, these variations found to exist in living beings. As described in at least paragraph [0008] of the published application, the "local anatomic environments" may be randomly selected, such that the probability of randomly selecting a certain "local anatomic environment" may correspond with the degree of occurrence that the "local anatomic environment" found in living beings, in order to provide a realistic simulation such that the "virtual environment," including the "local anatomic environments," may represent different anatomic variations found in a living being.

Statement Under 37 C.F.R. §1.133(b)

In response to the telephonic interview conducted July 17, 2008 and the Interview Summary dated July 22, 2008, Applicant wishes to thank the Examiner for the courtesies extended during the interview. Applicant has reviewed the Interview Summary and has found it to be substantially accurate in describing the substance of the interview.

Rejections under 35 U.S.C. §102 - *Jacobus*

Claims 1-2, 5, 7-8, 11-12, 16 and 19 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,769,640 ("Jacobus"). This rejection is respectfully traversed.

With regard to independent claim 1, the Examiner asserts that Jacobus teaches all of the claim limitations. Specifically, the Examiner asserts that Jacobus teaches selecting a local anatomic environment from a predefined library comprising a set of two or more separately modeled local anatomic environments, as the Examiner cites column 3, lines 57-67 in making this assertion.[1] The Examiner further asserts that Jacobus teaches including the selected local anatomic environment in a main virtual anatomic environment to form virtual anatomic environments, thereby allowing generation of different virtual environments, as the Examiner cites column 4, lines 12-19 in making this assertion.[2] Applicant asserts that Jacobus does not teach "selecting a local anatomic environment from a predefined library comprising a set of two or more local anatomic environments, *all of the local anatomic environments* of the library being *separately modeled*, the *local anatomic environments modeled to represent anatomic variations occurring in living beings*," as recited in claim 1.

Applicant submits that Jacobus teaches a method of measuring and recording sights and sounds of a medical procedure, and then accurately playing back the recorded data to generate new information to emulate responses to alternative actions taken by a surgeon trainee during simulation. The Jacobus method appears to be best summarized in column 4, lines 30-38, which cites two basic functions of the method. Specifically, the first function of Jacobus is "*measuring and recording*," and the second function is "*accurately playing back . . . using the recorded*

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[1] See page 2 of the current Office Action.
[2] See pages 2-3 of the current Office Action.

data." Applicant submits that the purpose of Jacobus is to fully *record* (as opposed to "*simulate*") medical procedures, one procedure at a time, in order to compile images for later playback. Images not fully recorded during the medical procedure itself, may be supplemented with images taken from other "medical diagnostics or image modalities," described in column 4, lines 5-9 of Jacobus to include CT data, PET data, MRI data, etc. Applicant asserts that the *measuring*, *recording*, and *accurate playback of recorded data images* (both images that are taken during the recording of the initial procedure, as well as images taken during "medical diagnostics"), is not providing a library of "local anatomic environments," all of the local anatomic environments being "*separately modeled,*" as recited in claim 1. Specifically, Applicant asserts that Jacobus is not "*modeling*" the "local anatomic environments," as recited in claim 1, but rather Jacobus is only *measuring* and *recording* images. And for at least this reason, Applicant asserts that Jacobus does not teach all of the limitations of claim 1.

Furthermore, Applicant asserts that Jacobus does not teach "the *local anatomic environments modeled to represent anatomic variations occurring in living beings,*" as recited in claim 1. The purpose of Jacobus is to *measure* and *record* images for accurate *playback*, and any images that Jacobus does not collect through the initial recording of the medical procedure, are then supplemented by diagnostic images. Jacobus does not teach, anywhere in the reference, the "*separate modeling*" of "local anatomic environments," where the environments are modeled for the purpose of representing "*anatomic variations occurring in living beings,*" as recited in claim 1. At best, Jacobus allows for the *measurement / recording* of images during a medical procedure, or during medical diagnostics, which may capture some miscellaneous "*anatomic variations,*" by luck or chance. However, Jacobus is not purposefully producing a library entirely comprised of separately modeled "local anatomic environments," where the different

environments are used to represent anatomic variations found in a living being. And for at least this reason, Applicant asserts that Jacobus does not teach "*all of the local anatomic environments* of the library being *separately modeled, the local anatomic environments modeled to represent anatomic variations occurring in living beings,*" as recited in claim 1.

Furthermore, Applicant submits that because Jacobus is not modeling local anatomic environments "*modeled to represent anatomic variations occurring in living beings,*" as recited in claim 1, Applicant therefore asserts that Jacobus also does not teach different "*virtual environments,*" created by selecting different local anatomic environments, such that "*each different virtual environment [represents] anatomic variations occurring in living beings,*" as recited in claim 1. And for at least this reason, Applicant asserts that Jacobus does not teach "the selection of different combinations of selected local anatomic environments in said main virtual anatomic environment thereby allowing generation of different virtual environments, *each different virtual environment representing anatomic variations occurring in living beings,*" as recited in claim 1.

With regard to independent claim 7, Applicant asserts that claim 7 contains features similar to independent claim 1, and therefore is patentable for at least the reasons stated above.

For at least the reasons stated above related to independent claims 1 and 7, Applicant asserts that these claims are patentable. Due at least to the dependence of claims 2, 5, 8, 11-12, 16 and 19 on independent claims 1 and 7, Applicant also asserts that these claims are patentable. Therefore, Applicant respectfully requests that the art grounds of rejection of these claims under 35 U.S.C. §102 be withdrawn.

Rejections under 35 U.S.C. §103 – *Jacobus in view of Ramshaw*

Claims 3-4, 6, 9-10, 13-15, 17-18 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jacobus in view of U.S. Patent No. 5,791,907 ("Ramshaw"). This rejection is respectfully traversed.

With regard to dependent claim 3, the Examiner admits that Jacobus fails to teach the step of randomly selecting one of the local anatomic environments in the library.[3] The Examiner asserts that Ramshaw teaches this limitation as the Examiner cites column 17, lines 9-12 of Ramshaw in making this assertion. Applicant submits that Ramshaw is an interactive medical training system used to provide education and training in medical procedures. A review of column 17, lines 9-12 indicates that Ramshaw allows for the simulation of *random and unexpected errors during a medical procedure*. Column 17, lines 13-16 provides an example of an "error," as in the case where a user may properly select the use of a balloon dissector in a medical procedure where the medical procedure equipment may nevertheless illustrate improper balloon placement. Ramshaw's use of randomly simulated *unexpected errors* does not teach or suggest randomly selecting between "*local anatomic environments*" used to represent "anatomic variations occurring in living beings," as recited in claim 1, and for this reason Applicant asserts that neither Jacobus, nor Ramshaw, either singly or in combination with each other, teach or suggest "wherein the step of selecting a local anatomic environment from a predefined library comprising two or more of local anatomic environments further comprises the step of *randomly selecting one of the local anatomic environments in the library*," as recited in claim 3.

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[3] Page 5 of the current Office Action.

With regard to dependent claim 4, Applicant asserts for at least the reasons stated above related to claim 3 that neither Jacobus, nor Ramshaw are selecting between "*local anatomic environments*" that represent anatomic variations occurring in living beings, and Ramshaw only selects between unexpected *simulation errors* in medical procedures. Neither Jacobus, nor Ramshaw even contemplate representing "*anatomic variations occurring in living beings,*" and for at least this reason Applicant asserts that neither Jacobus, nor Ramshaw, either singly or in combination with each other, teach or suggest "wherein *the probability of randomly selecting a certain local anatomic environment essentially corresponds with the degree of occurrence of that local anatomic environment in living beings,*" as recited in claim 4.

With regard to dependent claims 9 and 13, Applicant asserts that these claims contain features similar to claim 3, and therefore claims 9 and 13 are patentable for at least the same reasons.

With regard to dependent claim 10, Applicant asserts that claim 10 contains features similar to claim 4, and therefore claim 10 is patentable for at least the same reasons.

For at least the reasons stated above related to dependent claims 3, 4, 9, 10, and 13, Applicant asserts that these claims are patentable. Due at least to the dependence of claims 6, 14-15, 17-18, and 20 on independent claims 1 and 7 discussed above, Applicant also asserts that these claims are patentable. Therefore, Applicant respectfully requests that the art grounds of rejection of these claims under 35 U.S.C. §103 be withdrawn.

Rejections under 35 U.S.C. §103 – *Jacobus in view of Ramshaw*

Claims 21-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jacobus in view of Ramshaw. This rejection is respectfully traversed.

With regard to dependent claim 21, the Examiner asserts that Jacobus teaches components included in the local anatomic environment are excluded in the main virtual anatomic environment, as the Examiner cites column 4, lines 1-38 in making this assertion.[4] Applicant submits that the Examiner does not provide a limitation-by-limitation basis for making the assertions pertaining to claim 21. Specifically, the Examiner does not provide discussion on which components of Jacobus teach the asserted "*local anatomic environment*" and which components teach the asserted "*main virtual anatomic environment*," as recited in claim 21. However, Applicant asserts that Jacobus does not teach a "*local anatomic environment*" that is separate from a "*main virtual anatomic environment*," as recited in claim 21. Therefore, for at least this reason, Applicant asserts that neither Jacobus, nor Ramshaw, either singly or in combination with each other, teach or suggest "*wherein components included in the local anatomic environment are excluded in the main virtual anatomic environment,*" as recited in claim 21.

With regard to claim 22, Applicant asserts that claim 22 contains features similar to claim 21, and therefore Applicant asserts that claim 22 is patentable for at least the same reasons.

For at least the reason stated above related to claims 21 and 22, Applicant asserts that these claims are patentable. Therefore, Applicant respectfully requests that the art grounds of rejection of these claims under 35 U.S.C. §103 be withdrawn.

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[4] Page 8 of the current Office Action.

CONCLUSION

In view of the above remarks and amendments, Applicant respectfully submits that each of the rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By   _____

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